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动物分类学报

CHINESE UROTHRIPINI (THYSANOPTERA, PHLAEOTHRIPIDAE) INCLUDING A NEW SPECIES OF BRADYTHRIPS

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Abstract Eight species in three genera of the tribe Urothripini (Phlaeothripinae) are documented from China , including Bradythrips zhangi sp. nov. , and the genus Bradythrips Hood & Williams is newly recorded from China. A key is provided to the eight species : Baenothrips asper (Bournier) , B. murphyi (Stannard) , B. ryukyuensis Okajima , Stephanothrips japonicus Saikawa , S. formosanus Okajima , S. kentingensis Okajima , S. occidentalis Hood et Williams and Bradythrips zhangi sp. nov. The new species is similar to Bradythrips hesperus Hood et Williams in appearance , but can be distinguished from the latter by the following characters : 1) head brown in color ; 2) anal setae 2 pairs subequal in length , 2. 7 times as long as tube ; 3) tergites Ⅱ to Ⅷ each sculptured medially with longitudinal wrinkles. The type specimens are deposited at the Insect Collection , Department of Entomology , South China Agricultural University (SCAU).

Key words Thysanoptera , Urothripini , Bradythrips , new species.

Thysanoptera of the tribe Urothripini are highly specialized in appearance , and are usually found in leaf litter or grass tussocks in the tropics and subtropics. Members of this group can be recognized by their strongly tuberculate heads usually with prominent setae on the frontal margin , the long ninth abdominal segment , and the elongate tube with long terminal setae. However , complicated patterns of variation at the species level make the generic classification of the Urothripini unsatisfactory. Mound (1972) provided a key to the world genera , and several authors have described the high species diversity of the group in tropical and subtropical Asia (Ananthakrishnan , 1972 ; Kudô , 1978 ; Okajima , 1976 ; 1982 ; 1987 ; 1994 ; Okajima & Urushihara , 1995). However , information on the Chinese species of this group remains poor (Zhang & Tong , 1993). In this paper , three genera and eight species of the tribe , including one new species , are reported from China.

Key to Chinese Urothripini

1. Antennal segments Ⅲ, Ⅳ and Ⅴ separated ····· 2
   Antennal segments Ⅲ, Ⅳ and Ⅴ fused or broadly joined to form one segment ····· 5
2. Antennal segments Ⅶ and Ⅷ fused or broadly joined into one segment ; anal setae 2 pairs subequal in length and 2. 7 times as long as tube ····· Bradythrips zhangi sp. nov.
   Antennal segments Ⅶ and Ⅷ separated ····· 3
3. Abdominal tergites Ⅱ- Ⅶ each with a pair of long sigmoid wing retaining setae , antenna color segments Ⅳ- Ⅵ yellow and segments Ⅶ- Ⅷ brownish ····· Baenothrips murphyi
   Abdominal tergites segments Ⅱ- Ⅶ each with wing retaining setae but not sigmoid ····· 4
4. Head a little shorter than width , antenna color segments Ⅳ faint brownish and segments Ⅴ- Ⅷ brown ····· Baenothrips asper
   Head a little longer than width , antenna color segments Ⅳ- Ⅵ yellowish white , segments Ⅶ- Ⅷ brownish ····· Baenothrips ryukyuensis
5. Vertex of head with one or two pairs of elongate setae ····· 6
   Vertex of head with three pairs of elongate setae ····· 7
6. Vertex of head with one pair of elongate setae ····· Stephanothrips japonicus
   Vertex of head with two pair of elongate setae ····· Stephanothrips kentingensis
7. Tube less than 1. 5 times as long as head ; fore tibia darker ····· Stephanothrips formosanus
   Tube more than 1. 5 times as long as head ; fore tibia paler ····· Stephanothrips occidentalis

Baenothrips asper (Bournier)

Transithrips asper Bournier , 1963. 63 : 81.
Baenothrips asper (Bournier) : Mound , 1972. 20 : 92 ; Kudô , 1978. 46 (2) : 169 ; Bhatti , 2002. 36 : 3.

Distribution. China (Taiwan) ; India ; Angola.

Baenothrips murphyi (Stannard)

Transithrips murphyi Stannard , 1970. 39 : 122.
Baenothrips murphyi (Stannard) : Mound , 1972. 20 : 92 ; Kudô , 1978. 46 (2) : 169-170.

Distribution. China (Fujian , Guangdong) ; Malaysia ; Thailand.

Specimens examined. 1 ♂, National Chebaling Natural Reserve , Shixing , Guangdong Province , China , 15 Oct. 2002 , coll. by LI Zhi-Wei ; 1 ♂, Mt. Nankun , Huizhou , Guangdong Province , China , 12 Nov. 2001 , coll. by LI Zhi-Wei ; 1 ♀, Longdong , Guangzhou , Guangdong Province , China , 19 Mar. 2004 , coll. by WANG Jun ; 1 ♂, Jinhong , Yunnan Province , China , 5 Apr. 1987 , coll. by TONG Xiao-Li ; 2 ♀ ♀, Longdong , Guangzhou , Guangdong Province , 5 Dec. 2005 , coll. by WANG Jun.

Baenothrips ryukyuensis Okajima

Baenothrips ryukyuensis Okajima , 1994. 62 : 517.

Distribution. China (Taiwan) ; Japan.

Stephanothrips japonicus Saikawa

Stephanothrips japonicus Saikawa , 1974. 42 (1) : 7 ; Okajima 1976. 44 (4) :

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403, 406; Kudô, 1978. 46 (2): 170; Zhang & Tong, 1993. 4: 433.

Distribution. China (Guizhou, Guangdong, Hunan, Taiwan); Japan.

Specimens examined. 4 ♀♀, Mt. Luofu, Huizhou, Guangdong Province, China, 10 July 2004, coll. by WANG Jun; 2 ♀♀, Longdong, Guangzhou, Guangdong Province, China, 19 Mar. 2004, coll. by WANG Jun; 1 ♂, 22 ♀♀, National Chebaling Natural Reserve, Shixing, Guangdong Province, China, 15 Oct. 2002, coll. by LI Zhi-Wei.

Stephanothrips kentingensis Okajima

Stephanothrips kentingensis Okajima, 1976. 44 (4): 403, 407; Kudô, 1978. 46 (2): 171; Zhang & Tong, 1993. 4: 433.

Distribution. China (Guangdong, Taiwan); Japan.

Specimens examined. 1 ♀, National Dinghushan Natural Reserve, Zhaoqing, Guangdong Province, China, 16 Apr. 1987, coll. by TONG Xiao-Li; 2 ♀♀, National Chebaling Natural Reserve, Shixing, Guangdong Province, China, 15 Oct. 2002, coll. by LI Zhi-Wei.

Stephanopthrips occidentalis Hood et Williams

Stephanopthrips occidentalis Hood et Williams, 1925. 32: 69; Okajima, 1976. 44 (4): 404, 409; Kudo, 1978. 46 (2): 171; Okajima, 1982. 50 (1): 55; Zhang & Tong, 1993. 4: 433.

Distribution. China (Guangdong, Yunnan, Taiwan); Japan, Thailand, Malaysia, Philippines, South Africa, Angola, Jamaica, Trinidad, Mexico, America, Australia.

Specimens examined. 1 ♀, Jinghong, Xishuangbanna, Yunnan Province, China, 5 Apr. 1987, coll. by TONG Xiao-Li; 1 ♀, Menglun, Yunnan Province, China, 13 Apr. 1987, by TONG Xiao-Li. 1 ♀, National Dinghushan Natural Reserve, Zhaoqing, Guangdong Province, China, 15 Oct. 2002, coll. by LI Zhi-Wei.

Stephanothrips formosanus Okajima

Stephanothrips formosanus Okajima, 1976. 44 (4): 404.

Distribution. China (Taiwan).

Bradythrips Hood & Williams

Bradythrips Hood & Williams, 1925. 32: 68. Type species: B. hesperus Hood et Williams.

The genus Bradythrips was established by Hood & Williams for a single species from Guyana, South America. Subsequently, three further species have been described in the genus, from Indonesia (Okajima, 1987) and Malaysia (Okajima & Urushihara, 1995). The diagnostic characters of the genus include: head with one pair of major setae on anterior margin, antennae 7-segmented, maxillary stylets close together in middle of head, tube much longer than head and with 1 or 2 pairs of long anal setae (Hood, 1925). This genus is intermediate between Stephanothrips and Baenothrips in the structure of the antennae and head (Mound, 1972).

Bradythrips zhangi sp. nov. (Figs. 1-4)

Description. ♀ apterous. Body bicolor, yellow and brown, with some red hypodermal pigmentation. Pterothorax, middle femora and tibiae dark brown; head dorsal and lateral, abdomen lateral, tip of tube, hind femora and tibiae brown; middle and hind tarsi shaded brown; antennal segments Ⅱ and Ⅶ light brown; prothorax and fore leg and the rest straw yellow.

Head (Fig. 1) about 1.3 times as long as broad, gradually widened towards base, widest across near base, dorsal surface and lateral (included between eyes) tuberculated; dorsum with 1 pair of major blunt setae on anterior margin; cheeks with more than 10 pairs of stout setae on well developed tubercles; head projecting in front of eyes. Eyes reduced, about one-tenth of the head length; postocular setae stunt apically and about 2 times as long as dorsum setae; ocelli absent. Antennal (Fig. 2) seven-segmented, with traverse wrinkles, morphological segments Ⅶ and Ⅷ fused completely, longest, sense cones long and slender, segment Ⅲ with 1, segment Ⅳ with 2, segment Ⅴ with 2, segments Ⅳ, Ⅴ, Ⅵ subequal in length; maxillary stylets long reaching the eyes, close together in middle of head.

Pronotum trapezium, with weaker tuberculate; anteroangulars setae, antermomarginal setae and epimeral setae reduced, posteroangulars setae as long as postocular setae, stout apically. Mesonotum with polygonal reticulates, and with 5 pairs of minute stunt setae on well developed tubercles. Metanotum polygonal reticulates, with more than eight pairs of minute stunt setae on well developed tubercles, distinct tuberculate and one prominent setae and some minute stunt setae on well developed tubercles each laterally.

Abdominal tergites Ⅱ to Ⅶ each with a row of minute blunt setae, tergites Ⅱ to Ⅷ each sculptured medially with longitudinal wrinkles (Fig. 3). Tube about 1.7 times as long as head, basal and apical subequal in width, the narrowest at basal third; anal setae 2 pairs subequal in length, 2.7 times as long as tube (Fig. 4).

Measurements of the holotype ♀ in μm. Total distended body length 1 675. Head length 200, width across cheeks 150; eye length 19. Dorsum blunt setae on anterior margin length 48. Postocular setae 20. Pronotum median length 86, width 194. Tube length 338, basal width 31, basal third width 19, apical width 31, anal setae length 875. Antennal segments Ⅰ-Ⅶ length (width) as follows: 21 (25); 28 (29); 41 (24); 38 (25); 35 (20); 36 (16); 48 (15).

Male aptera. Colour and structure similar to female, but abdominal tergites Ⅱ to Ⅷ without distinct longitudinal wrinkles.

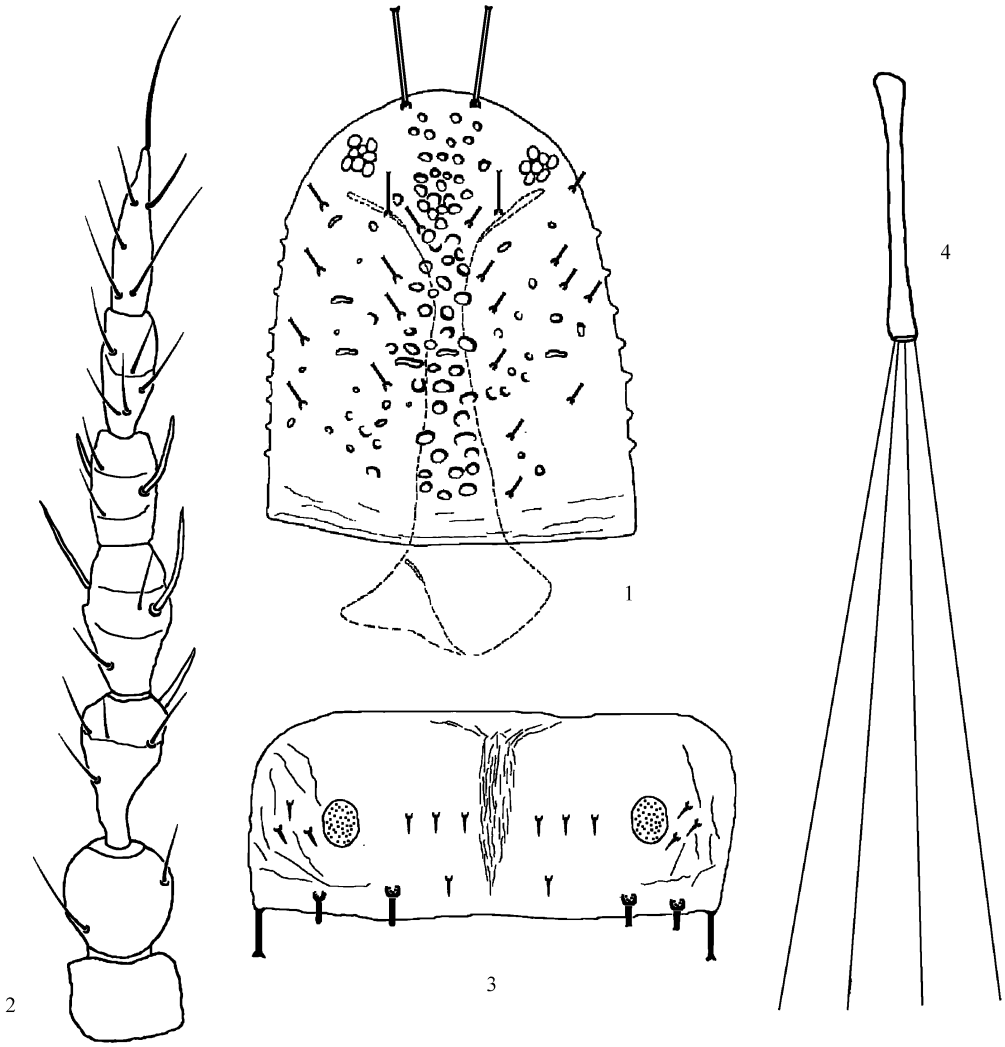
Total distended body length 1 200. Head length 175, width across cheeks 58. Dorsum blunt setae on

anterior margin length 25. Postocular setae 12.5. Tube length 250, basal width 25, basal third width 15, apical width 25, anal setae length 775. Antennal segments Ⅰ-Ⅶ length (width) as follows: 19 (25); 25 (25); 38 (20); 33 (24); 31 (19); 30 (15); 46 (14).

Specimens examined (Slides mounted with Canada balsam). Holotype ♀ (aptera), Mt. Nankun (23°38′38″N, 113°50′49″E), Longmen, Guangdong Province, China, 27 Oct. 2001, coll. by LI Zhi-Wei from leaf litter. Paratypes: 3 ♀♀, 12 Nov. 2001, same data as holotype; 2 ♀♀, Shimentai Natural Reserve, Yingde, Guangdong Province, China, 10 Apr. 2002, coll. by LI Zhi-Wei; 1 ♂, National Dinghushan Natural Reserve (23°10′N, 112°34′E), Zhaoqing, Guangdong Province, China, 15 Dec. 2002, coll. by LI Zhi-Wei.

Etymology. The specific name zhangi is named after Chinese thysanopterist ZHANG Wei-Qiu in honor of his contribution to thrips fauna of China.

Remarks. The species is similar to Bradythrips hesperus Hood et Williams in appearance, but can be distinguished from the latter by the following features: 1) head brown in color; 2) anal setae 2 pairs subequal in length, 2.7 times as long as tube; 3) tergites Ⅱ to Ⅷ each sculptured medially with longitudinal wrinkles.



Figs. 1-4. Bradythrips zhangi sp. nov., ♀. 1. Head. 2. Antenna. 3. Abdominal tergite Ⅵ. 4. Tube and anal setae.

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中国尾管蓟马族种类及一新种记述 (缨翅目, 管蓟马科)

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摘 要 记述中国尾管蓟马族 3 属 8 种, 其中瘤突管蓟马属 Bradythrips Hood et Williams 为中国新纪录属, 并描述了该属 1 新种, 张氏瘤突管蓟马 Bradythrips zhangi sp. nov.; 编制了中国尾管蓟马族种类名录及种类检索表。新种与近似种 Bradythrips hesperus 的形态区别: 1) 新种雌虫腹部 2～8 节腹面中央各着生 1 个纵向刻纹斑, 而 B. hesperus 缺该特征; 2) 新种头部褐色, 而 B. hesperus 头部草黄色; 3) 新种肛鬃 2 对等长, 而 B. Hesperus 肛鬃 2 对不等长。新种的模式标本保存于华南农业大学昆虫学系昆虫标本室 (SCAU)。

关键词 缨翅目, 尾管蓟马族, 瘤突管蓟马属, 新种.

中图分类号 Q969.34